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**Effective Teaching and Learning in Accounting Education: Examining the linkages between students' perceptions of the teaching context, students' approaches to learning and students' outcomes**

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# Effective Teaching and Learning in Accounting Education: Examining the linkages between students' perceptions of the teaching context, students' approaches to learning and students' outcomes

## Abstract

Research in accounting education has almost neglected both student perceptions of the learning context and their approaches to learning. Instead, studies have focused on either the teaching context or the outcomes of learning. This omission has meant that accounting educators often experience difficulty in understanding students conceive learning to be, how they perceive the learning task, or how they approach learning. The purpose of this paper is to examine the relationship between the perceptions, the approaches and the outcomes of students in a business subject in order to discover how these students learn and thus to provide some strategies which could be adopted to enhance their learning. The methodology has been to adopt a survey approach which combines two published surveys. One is the Course Experience Questionnaire which was designed to measure five key areas of a positive learning environment: good teaching, clear goals and standards, appropriate workload, appropriate assessment, and emphasis on independence. The other survey is the Study Process Questionnaire in which approaches to studying have been identified as either surface, deep or achieving. It is believed that this paper will promote the dissemination of research into effective teaching and learning by considering the implication of the approaches of accounting students to learning and the adaptation of teaching styles.

## Keywords

approaches, context, students, between, linkages, examining, education, learning, teaching, perceptions, outcomes, effective, accounting

## Disciplines

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**Effective Teaching and Learning in Accounting Education:  
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## **Effective Teaching and Learning in Accounting Education:**

### **Examining the linkages between students' perceptions of the teaching context, students' approaches to learning and students' outcomes.**

#### **Abstract**

Research in accounting education has almost neglected both student perceptions of the learning context and their approaches to learning. Instead, studies have focused on either the teaching context or the outcomes of learning. This omission has meant that accounting educators often experience difficulty in understanding students conceive learning to be, how they perceive the learning task, or how they approach learning. The purpose of this paper is to examine the relationship between the perceptions, the approaches and the outcomes of students in a business subject in order to discover how these students learn and thus to provide some strategies which could be adopted to enhance their learning. The methodology has been to adopt a survey approach which combines two published surveys. One is the Course Experience Questionnaire which was designed to measure five key areas of a positive learning environment: good teaching, clear goals and standards, appropriate workload, appropriate assessment, and emphasis on independence. The other survey is the Study Process Questionnaire in which approaches to studying have been identified as either surface, deep or achieving. It is believed that this paper will promote the dissemination of research into effective teaching and learning by considering the implication of the approaches of accounting students to learning and the adaptation of teaching styles.

#### **1. Introduction**

The need to understand the process of student learning in order to improve the quality of that learning has been identified in the education literature (for example, see Biggs, 1978, 1987a, 1987b, Marton and Saljo, 1976, Ramsden, 1992). In addition, the outcomes of this learning have been identified in quantitative, qualitative or attitudinal terms (Biggs, 1990; Marton and Booth, 1997). To this end there have been a number of models of student approaches to learning (Biggs, 1988; Kember and Gow, 1989; Marton and Saljo, 1976; Zhang, 2000). Each model has considered the antecedents, and by way of application, the effectiveness of various learning approaches.

Marton and Ramsden (1988) suggest that the problem with most higher education research on teaching and learning is that it focuses on learning as gathering information to use later, and on teaching as transmitting information and techniques that support this conception of learning. Instead, most studies have focused on either the teaching context or the outcomes of learning. This omission has meant that educators often experience difficulty in understanding students conceive learning to be, how they perceive the learning task, or how they approach learning. An analysis of accounting education research suggests a similar perspective, with only a few studies focussing on the perceptions of the learning environment and approaches to study by accounting students (Booth et al, 1999; Gow et al, 1994; Mladenovic, 2000, Sharma, 1997). Indeed, Gow et al (1994, p. 118) urged that an in-depth examination of "the ways students approach their study can provide insights into how students learn and thus provide a guide to the teaching strategies needed to improve their learning". Further, research in business education has largely neglected the link between student perceptions of the learning context and their approaches to learning (see review by Lucas, 1996).

In order to overcome this deficiency, this study has two aims. First, it provides evidence concerning the linkage between how students perceive their learning environment and the approaches they adopt to their learning. Secondly, the study considers the link between other factors such as age, nationality and mode of study with students' approaches to learning. The purpose of this paper is thus to examine the relationship between the perceptions, the approaches and the outcomes of students in a business subject in order to discover how these students learn and thus to provide some strategies which could be adopted to enhance their learning. The next section discusses the model adopted for this research project. The third section outlines the research method. This followed by a discussion of the results with the final section presenting the implications for business educators and suggestions for further research.

## **2. The Model of the Learning Process**

The model illustrated in Figure 1 is a variation that combines both that of Ramsden (1992, p. 83) with that of Hassall and Joyce (2001, p. 146). The most significant difference is the direct link between personal factors and

students approaches. If these factors are extended to incorporate cultural variations, this link becomes even stronger (Hofstede, 1994; Merriam and Mohamad, 2000; Shafer and Park, 1999). However, this is left for a later paper.

INSERT FIGURE 1 ABOUT HERE

### ***Learning Context***

Recent research has suggested that the assessment methods that are used in higher education are the predominate factor within the learning context which will affect students' perceptions and, in turn, their approaches to learning (Atkins, 1993, Hassall and Joyce, 2001, Ramsden 1992). Other key areas within the context of learning have been identified as teaching methods, curriculum, experience and atmosphere (Abraham, 1995; Ramsden 1992).

### ***Students' Perceptions***

The Course Experience Questionnaire (CEQ) reported by Ramsden (1991) was designed to measure students perceptions regarding five key areas of a positive learning environment: good teaching, clear goals and standards, appropriate workload, appropriate assessment, and emphasis on independence. Since most students appear to adopt an approach to studying that they perceive to be appropriate for a particular situation, it is important to recognise that "it is the student's perception of the factors that is crucial and the student's perception may be different from that of the institution that is overseeing the learning process" (Hassall and Joyce, 2001, p. 146).

### ***Students' Approaches***

Approaches to learning have been identified as either surface, whereby rote learning is largely utilised, or deep, involving a critical examination of the evidence and relating arguments to prior knowledge and understanding (Marton and Saljo, 1970; Entwistle and Marton, 1984). Students who adopt a surface approach appear to have their desire for the knowledge of subject both driven and defined in terms of assessment requirements, and hence

often fail "to recognise fundamental and guiding principles and patterns" (Hassall and Joyce, 2001, p. 146). In contrast, students who adopt a deep approach to learning are interested in grasping "a real understanding of what is learned (Zhang and Sternberg, 2000, p. 471). They tend to adopt such an approach in circumstances "where they are motivated to understand, where they are active, where they discuss what is to be understood, and where they encounter knowledge in well-structured ways" (Gibbs, 1995, p. 24).

Biggs (1987a) extended this earlier research by identifying a third approach to learning. He called this an "achieving" approach which is "describes the ways in which students organize the temporal and spatial contexts surrounding the task" (Biggs, 1987a, p. 12).<sup>1</sup> Combining these three types of learning approaches, Biggs developed a model of student learning "in terms of the motives a student has for engaging in a learning task, and the strategies adopted so that the student's intentions are realized" (Biggs 1987a, p. 2) His three motive-strategy combinations that comprise the three common approaches to learning are described in Table 1.

INSERT TABLE 1 ABOUT HERE

### ***Students' Outcomes***

Students' outcomes may identified be in terms of performance or in terms of attitude (Biggs 1990, Marton and Booth, 1997). In relation to performance outcomes, Ramsden (1992) drew on British, Australian and Canadian research (such as Entwistle, 1984; Knapper, 1990), to suggest that there were three main educational objectives as shown in Table 2. However, he also commented that content-related types of objectives are important because "they form a rather more accessible link between studies of what students have learned and the curriculum with which they are provided than the more general aims" in Table 2. (Ramsden, 1992, p. 20). Thus, performance outcomes may be measured in both objective and subjective terms.

INSERT TABLE 2 ABOUT HERE

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<sup>1</sup> This "third aspect of student learning" (Gibbs, 1992, p. 53) was also recognised by Entwistle and his colleagues (Entwistle, 1988; Entwistle and Tait, 1990; Entwistle and Waterson, 1988).

Attitudinal outcomes are also an important consideration in the model. This has been expressed as the need for "engaging with feelings, values and motives as well as with intellectual development" (O'Neil, 1995, p. 121). Any measure of this such outcomes will necessarily be subjective and reflexive, although factors such as degrees of satisfaction, enthusiasm, anxiety-minimisation and quality may be able to expressed in relative terms on a continuum. The difficulty is that what one student considers "perfect" may only be considered as "mediocre" by another student.

### **3. Research Method**

#### ***The sample***

Data was collected from students enrolled in a final year accounting subject (Management Accounting III) at the University of Wollongong (UOW) in Australia. Two questionnaires were administered one week apart during lectures. Although participation was optional, all students who attended the respective lectures completed the questionnaires. Lectures in this subject were compulsory but attendance varied from week to week, and thus not all students completed both questionnaires. The 184 students who responded to the survey represent just over 75 percent of the number of students enrolled in the subject. The number of responses is summarised in Table 3.

INSERT TABLE 3 ABOUT HERE

The response rate was high with useable responses for at least one survey being 75.1%. Given that the survey was given to all students who attended the lectures and the high attendance of students (generally around 75%), there appears little indication of nonresponse bias. There was a high response of useable instruments returned for both parts of the survey, with the two parts being able to be matched to the same student in more than half of the cases.

#### ***The survey instrument***

The survey was administered in the form of two separate questionnaires with each being split into three sections. The first and third sections of each questionnaire were identical, with the first section gathering personal



information such as age, gender, countries of birth of the student and both parents and mode of study. Students were also given the option of adding their student numbers, so that the two parts of the survey could be matched wherever possible. However, in order to maintain privacy, this was a purely voluntary response. The third section of each questionnaire asked students for details of their past performance, their expected performance in both the subject and in the first assessment task, and their overall satisfaction with the subject. Here again, the provision of the student number was important in order to be to match students' expectations with their actual performance.

The middle section of the first questionnaire was composed of the 42 items of the Study Process Questionnaire (SPQ) as developed by Biggs (1985, 1987a) modified so that that they were relevant to a subject rather than a whole course. (See Appendix A.) Responses were made by circling responses on a five-point scale, from 1 (never true) to 5 (always true). Biggs (1987b) reported extensively on the reliability, internal consistency and the construct validity of his instrument, which has, in addition, been supported by other researchers (Beattie et al, 1997; Booth et al, 1999).

The middle section of the second questionnaire consisted of the 30 items of the Course Experience Questionnaire (CEQ) developed by Ramsden (1989, as reported in Mathews et al, 1990; Ramsden, 1991). These items were similarly adapted so as to apply to a subject rather than to a whole course and responses were recorded in the same way as for the first questionnaire. (See Appendix B.) The validity of this instrument has been attested by its extensive use by Australian universities (Mathews, 1990).

#### **4. Results and Discussion**

##### ***SPQ Data: Approaches to Learning***

Each item on this questionnaire relates to one of six motive or strategy subscales. Scores on seven items were summed to obtain the score for each subscale. The subscales were then combined to produce three main scales of approaches to learning: surface, deep and achieving as previously shown in Table 1.

The SPQ means have no absolute meaning but can be used for correlation with other variables and for comparison within and between groups. Biggs (1987b, 13) also suggested that the SPQ scores may be used for making instructional decisions by considering the student profiles obtained from the subscale scores. Mean SPQ scores are shown in Figure 2. The overall means for the entire sample in this study are shown by the bars labelled "All UOW". The results are also given for the Australian-born (UOW-Aust) and Asian-born (UOW-Asian) students. These are compared with results for other Australian and Asian students. The comparison with Australian students is against the Australian norms (Biggs, 1987b). These mean SPQ figures (Aust-Arts; Aust-Science) were for students in five universities from three States, but were limited to Arts, Education and Science faculties and departments. The Asian comparison is with Hong Kong students. One (HK-Accy) is for 250 students enrolled in Accountancy courses who were given both English and Chinese versions of the questionnaire (Gow et al, 1994). The other (HK-Eng version) is for 94 students (across all departments) to whom the questionnaire was administered in English only (Kember and Gow, 1991).

INSERT FIGURE 2 ABOUT HERE

The comparison shows that the surface-approach (SA) score is higher for UOW students in all categories. The deep-approach (DA) score is lower for both the overall UOW results and the Australian born students. However, the deep-approach score for UOW Asian born students is comparable with those of the Hong Kong students. Overall, UOW students score higher on the achieving-approach (AA) than other students in other Australian studies, and the achieving-approach score of the UOW Asian students is higher than those for all other studies.

A possible explanation for the high achieving-approach score for the UOW Asian students may be related to the large number of them who are fee-paying students and only resident in Australia for the duration of their degree. This places these students under additional pressure to perform well and to adopt strategies which ensure success. The comparatively high surface approach mean score for this group may arise because the language difficulties experienced by these students encourage them to adopt a reproducing learning style.

### ***CEQ Data: Perceptions of the Learning Context***

The CEQ instrument included questions phrased as both positive and negative statements. The responses along the five point continuum, “definitely agree ... definitely disagree”, were recorded where necessary so that good teaching practice was indicated by a high scale score. Each of the individual items were then aggregated into one of five scales: good teaching, clear goals and standards, appropriate workload, appropriate assessment and emphasis on independence. The means and standard deviations for each scale is shown in Table 3 with the means represented graphically (UOW-Subject) in Figure 3.

INSERT FIGURE 3 ABOUT HERE

The CEQ was also used by Mathews et al (1990) in their survey of both final year accounting students and accounting graduates, but all the items referred to the ‘accounting degree’ as a whole and not to a specific accounting subject as in the present study. The results of the Mathews study were provided by institution, as well as by respondent type. Figure 3 shows the mean scores on each scale for both the Wollongong students (UOW-Students) and the Wollongong graduates (UOW-Grads), as well as those of the overall survey (All Accy). For comparison, Figure 3 also shows the means for each scale derived from an Australian national trial (Nat. Trial) of the CEQ undertaken by Ramsden (1991), in which the sample was drawn from final year students in undergraduate programs in 13 higher education institutions.

### ***Correlation of SPQ and CEQ Results***

There is evidence that students can be influenced to use surface strategies if certain contextual factors are present in the learning and teaching environment. Such contextual factors include motivation, teaching style, workload, and the nature of assessment.

### *Motivation*

Fransson (1977) showed that students who were disinterested in subject matter and failed to perceive its relevance to their own needs were more likely to adopt a surface approach. This may be extrapolated to Management Accounting III which is a compulsory subject, and the last to be completed in the course. Many students view it as something which has to be borne and passed, and their last step to freedom, rather than being intrinsically interested. Often, by this stage of their course they are spending considerable time searching for jobs and attending interviews with prospective employers.

This study provides further evidence of the relationship between intrinsic motivation and the deep approach. There is a highly significant correlation ( $p = 0.0001$ ) between the SPQ scores for the deep-approach and those for deep-motivation, a subscale which encompasses intrinsic motivation.

### *Teaching Style*

Teaching style has been shown to influence the approach students take in their learning (Entwistle and Ramsden 1983; Ramsden 1992). The research suggests that stimulation of interest, understandable explanations, empathy with students' needs, clear goals, appropriate feedback, and the encouragement of independent thought is associated with deep approaches to learning. This is consistent with the findings of the present study which show a highly significant positive association between the scores on good teaching and those for both deep and achieving approaches. (See Table 4.)

INSERT TABLE 4 ABOUT HERE

### *Workload*

Table 4 also indicates that there is a statistically significant relationship between an inappropriately heavy workload and a surface orientation to learning. This supports similar findings by Ramsden and Entwistle (1981). In the present study the mean score for appropriate workload was only 2.68 (Table 3) indicating a propensity towards surface approaches to learning.

### *Nature of Assessment*

The study evidenced a highly significant correlation between appropriate assessment and the deep and achieving approaches to learning, but a negative non-significant relationship between appropriate assessment and surface-approach scores. This appears to indicate that the assessment (mean 3.04) (Table 3) was generally judged to be inappropriate by students who had adopted a surface approach to learning. This course may have been perceived by many students to have made surface demands involving memorisation and replication. Entwistle and Ramsden (1983) also found that the nature of assessment influenced students' approach to particular learning tasks.

### *Emphasis on Independence*

Quantitative evidence (Ramsden and Entwistle 1981) has also identified an association between a lack of freedom in learning and a surface approach. The present study identified significant positive relationships between students' perceptions of emphasis on independence and the adoption of deep ( $p = 0.0001$ ) and achieving ( $p = 0.0001$ ) approaches, and a negative (although not significant) association between independence and a surface approach. (See Table 4.) Given the relatively low mean for emphasis on independent learning (2.46), it is not surprising that the mean score for surface-approach was relatively high. In the subject being considered, the only choice made by the students was in relation to a choice of essay topic (one of four). The other assessment exercises allowed no choice and all parts of the subject were examinable.

### *Student Outcomes*

Students were asked four questions in relation to outcomes:

- \* What grade do you expect to receive for the first assessment task in this subject?
- \* What grade do you expect to receive for this subject overall?
- \* What has been your average grade in all subjects you have studied at University?
- \* How satisfied are you with this subject?

The first three questions relate to expected outcomes, or performance. Students were given a choice of five answers expressed as percentages: 0-49 (Fail - F), 50-64 (Pass - P), 65-74 (Credit - C), 75-84 (Distinction - D) and 85-100 (High Distinction - HD). The fourth question relates to the attitudinal outcome "satisfaction" and was scored from 1 (not at all) to 5 (a lot).

### *Performance Outcomes*

The results for each of the performance outcomes is shown in Table 5, together with the actual outcomes for both the individual assessment task and the course overall. It is interesting to note that whereas almost half the students expected to obtain a credit in the assessment component, with the remainder being almost evenly distributed between a pass and a distinction, that the actual grades of 81% of the students were reasonably evenly distributed between pass, credit and distinction.

INSERT TABLE 5 ABOUT HERE

The past average grade correlated very highly with the grade predicted for the overall course ( $p = 0.0001$ ) and also with the predicted outcome for the assessment component ( $p = 0.0001$ ) (see Table 6) indicating that students' perceptions are influenced by their past achievements.. There is also a significant correlation ( $p = 0.0161$ ) between the predicted and actual grades for the course overall, but no significant correlation between the predicted and actual assessment component outcomes. This indicates that students have more difficulty in predicting the outcome of an individual assessment task than in predicting the outcome of an overall subject with aggregative assessment components.

INSERT TABLE 6 ABOUT HERE

The figures in Table 7 indicate that there is a significant association between a deep approach to learning and predicted results for both the assessment component and the subject overall. Conversely, a surface approach is significantly negatively correlated with predicted grades.

When the actual subject grades are considered in relation to the approaches to learning, the most significant relationship is a negative correlation ( $p = 0.0613$ ) between the surface approach and overall course grades. This is consistent with the finding of Watkins (1983) that, in each degree area he investigated, surface learning was significantly negatively correlated with academic achievement. A possible reason for this is that grades may not be a reliable and valid measure of deep learning because assessment methods may not test understanding.

There is also no significant relationship between the actual outcome for the assessment component and any particular approach to learning (see Table 7). This absence of any significant positive relationship between deep learning and good performance outcomes is in direct contradiction with the results of Entwistle and Ramsden (1983) who found that students adopting a deep approach had the best outcomes, while those who used a surface approach were less likely to obtain high scores. However, as in the present study, Watkins and Hattie (1985) found low correlations between learning approaches and grades. They suggested that this may be because students have the perceptions that surface learning strategies are sufficient to satisfy assessment requirements. This possibility must encourage the business educator to look at the appropriateness of assessment strategies.

INSERT TABLE 7 ABOUT HERE

#### *Attitudinal Outcomes*

The correlation between students' overall satisfaction and their perceptions is provided in Table 8 for the results of the present study (for a subject) and Mathews et al (1990) for all accountancy students (for a whole course). There appears to be a reasonable agreement for most of the contextual variables. The exceptions are that students in the present study were more satisfied with the workload and less satisfied with the appropriateness of the assessment, than those in the Mathews et al (1990) study.

INSERT TABLE 8 ABOUT HERE

The results of the present study show that there are no statistically significant correlation between satisfaction and quantitative outcomes (see Table 6). However, there is a highly significant relationship between satisfaction and both the deep approach and the achieving approach, and a negative (although not statistically significant) correlation between satisfaction and a surface-approach to learning (see Table 7). Whereas correlations do not indicate causality, only association, it may be reasonable to hypothesise that students who adopt a deep approach to learning will be more satisfied with the course than those who adopt a surface approach. This supports the assertion of Ramsden (1992, 58) that "deep approaches are almost universally associated with a sense of involvement, challenge, and achievement, together with feelings of personal fulfilment and pleasure". He suggests that students who adopt a deep approach find the material more interesting and consequently will spend longer studying it.

## **5. Implications for Accounting Educators**

Both this study and the comparative studies considered have indicated the propensity of surface approaches in accounting education. It is therefore necessary to investigate current practices in teaching accounting subjects and implement improvements to encourage students to develop imaginative, flexible and adaptive skills which can only be properly established by adopting a deep approach to learning.

A starting point is to consider those areas of the teaching context in which there was a significant correlation between students' perceptions and their approaches to learning. Good teaching, appropriate assessment and emphasis on independence are positively correlated with a deep approach to learning (see Table 4). Improvement in these areas may encourage students to adopt a deep approach. Conversely, there is a significant negative correlation between a surface approach and both clear goals and appropriate workload, which indicates that improvement in these two areas of the teaching context may encourage students to be less inclined to adopt a surface approach.

Ramsden (1992) suggests that it is not possible to train students to adopt deep approaches when the educational environment is giving them the message that surface approaches are rewarded. Students may learn strategies to



achieve high grades at the expense of understanding the material. In other words, unsuitable assessment procedures may put pressure on students to take the wrong approaches to learning tasks. Accounting educators should ensure that assessment procedures are appropriate.

Clear goals and standards allow students to know where they are headed and thus encourage them to take responsibility for their own learning. Accounting educators should ensure that it is made clear to students what is expected of them in the course. To this end departments and schools may consider instigating review committees, comprising of both staff and students to check subject programs before printing and distribution.

This study provides evidence that students' approaches to learning in a business subject are related to their perceptions of the learning context. As such it highlights various aspects of the learning environment which might be enhanced so as to help improve students' approaches to the learning of a business subject. As positive changes are made, it is expected that they will be reflected in the adoption of deeper approaches to learning resulting in a flow through to better outcomes in terms of both performance and satisfaction.

Further research could address the difference in predictive abilities of students adopting different approaches to learning, thus providing a means for accounting educators to enable students to take corrective action where appropriate. Further research could also investigate the long-term professional development implications of a deep versus a surface learning approach.

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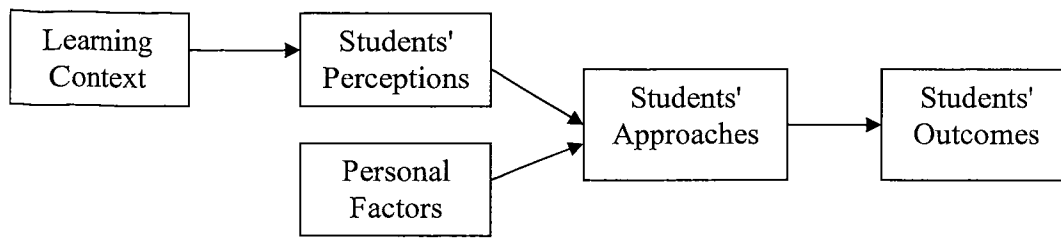
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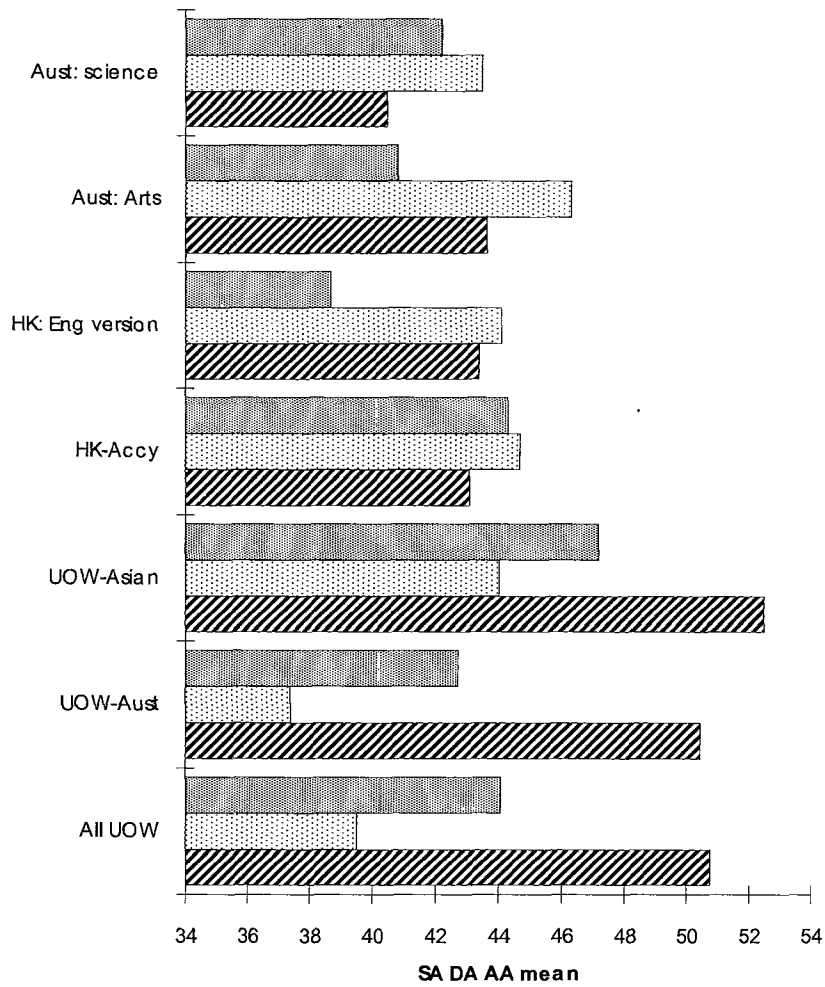
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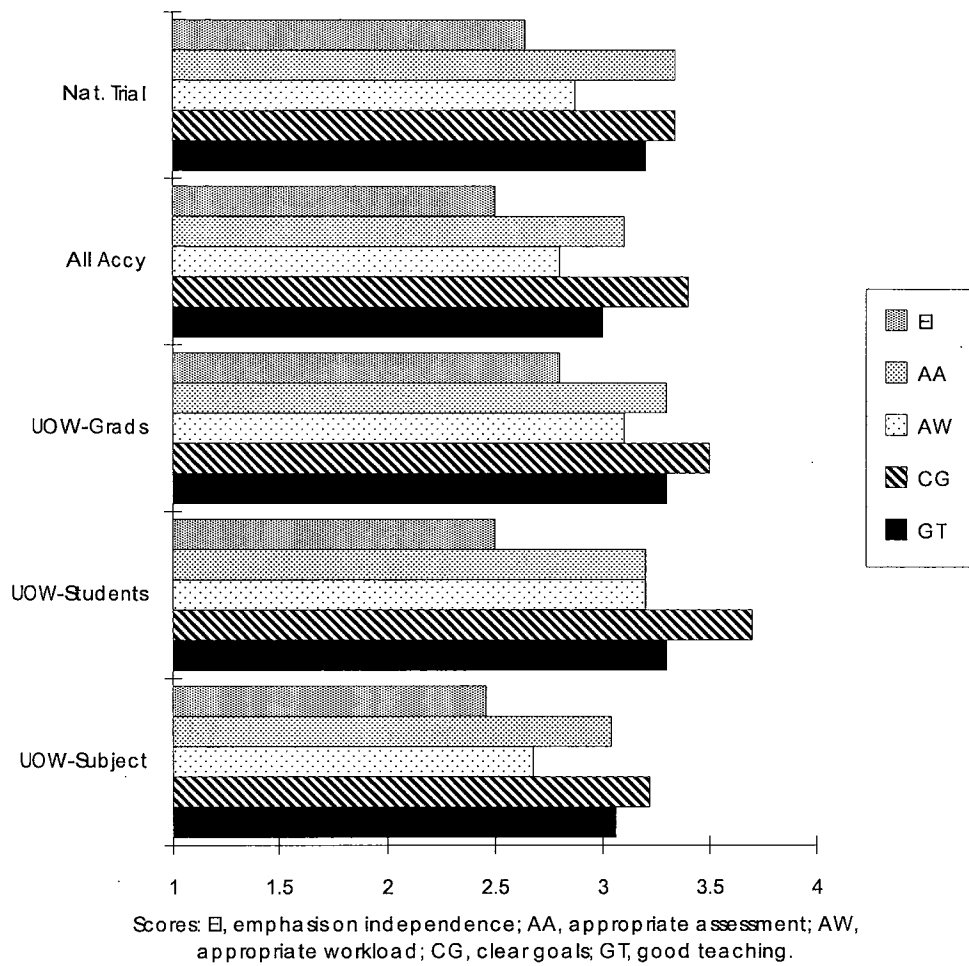
**Figure 1: Simplified Model of the Learning Process**



**Figure 2: Mean SPQ Scores**



**Figure 3: Mean CEQ Scores**



**Table 1: Approaches to learning in terms of motive and strategy**  
Adapted from Biggs (1987a, 11)

<b>Approach</b>	<b>Motive</b>	<b>Strategy</b>
<i>Surface</i>	<u>Instrumental</u> : main purpose is to meet requirements minimally: a balance between working too hard and failing	<u>Reproductive</u> : target limited to bare essentials and reproduced through rote learning
<i>Deep</i>	<u>Intrinsic</u> : study to actualise interest and competence in particular academic subjects	<u>Meaningful</u> : read widely, interrelate with previous relevant knowledge
<i>Achieving</i>	<u>Based on competition and ego-enhancement</u> : obtain highest grades, whether or not material is interesting	<u>Based on organising one's time and working space</u> : behave as 'model student'



**Table 2: Generally agreed educational objectives**

Source: Ramsden (1992, p. 20)

- |  |
|--|
| <ul style="list-style-type: none"><li>• To teach students to analyse ideas or issues critically.</li><li>• To develop students' intellectual/thinking skills.</li><li>• To teach students to comprehend principles or generalisations.</li></ul> |
|--|

**Table 3: Responses to survey**

	<b>No. of students</b>	<b>% of enrolments</b>	<b>% of responses</b>
Total number of students enrolled in subject	245		
Total number of student responses	184	75.1%	
Part A useable responses	120	49.0%	65.2%
Part B useable responses	160	65.3%	87.0%
Both Part A and Part B useable responses	94	38.4%	51.1%

**Table 4: Scale characteristics of the present UOW CEQ study**

<b>Scale</b>	<b>Mean</b>	<b>SD</b>
Good Teaching	3.06	0.61
Clear goals and standards	3.22	0.62
Appropriate workload	2.68	0.73
Appropriate assessment	3.04	0.57
Emphasis on independence	2.46	0.61

**Table 5: Pearson Correlation Coefficients  
Perceptions (CEQ Scales) and Approaches (SPQ Scales)  
(p-values in parentheses)**

	<b>Surface</b>	<b>Deep</b>	<b>Achieving</b>
Good Teaching	0.050 (0.6343)	0.373 (0.0002)	0.417 (0.0001)
Clear goals and standards	- 0.202 (0.0518)	0.190 (0.0686)	0.163 (0.1182)
Appropriate workload	- 0.254 (0.0142)	0.033 (0.7549)	0.003 (0.9770)
Appropriate assessment	- 0.081 (0.4420)	0.217 (0.0367)	0.309 (0.0026)
Emphasis on independence	- 0.079 (0.4488)	0.531 (0.0001)	0.461 (0.0001)

**Table 6: Performance Outcome Variables - Descriptive Statistics**

<b>Outcome Variable</b>	<b>n</b>	<b>F (1) %</b>	<b>P (2) %</b>	<b>C (3) %</b>	<b>D (4) %</b>	<b>HD (5) %</b>	<b>Mean</b>	<b>SD</b>
Predicted assessment result	184	0.5	22.8	48.9	22.8	4.9	3.09	0.82
Actual assessment result	162	3.7	25.3	27.2	29.0	14.8	3.26	1.11
Predicted course grade	184	0.0	27.2	51.6	17.9	3.3	2.97	0.76
Actual course grade	162	6.8	39.5	43.8	9.3	0.6	2.57	0.78
Past average grade	180	1.1	36.1	52.2	10.0	0.6	2.73	0.68

**Table 7: Correlation Matrix of Outcome Variables  
(p-values in parentheses)**

	<b>Satisfaction</b>	<b>Predicted Assessment Result</b>	<b>Actual Assessment Result</b>	<b>Predicted Subject Grade</b>	<b>Actual Subject Grade</b>	<b>Past Average Grade</b>
Satisfaction	1.000					
Predicted Assessment	0.086 (0.2450)	1.000				
Actual Assessment	- 0.052 (0.5160)	0.022 (0.7852)	1.000			
Predicted Subject Grade	0.106 (0.1518)	0.723 (0.0001)	- 0.002 (0.9847)	1.000		
Actual Subject Grade	0.022 (0.7847)	0.007 (0.9309)	0.332 (0.0001)	0.189 (0.0161)	1.000	
Past Average Grade	0.130 (0.0826)	0.437 (0.0001)	0.174 (0.0301)	0.495 (0.0001)	0.318 (0.0001)	1.000

**Table 8: Correlations of Outcomes with Approaches to Learning  
(p-values in parentheses)**

<b>Approach</b>	<b>Satisfaction</b>	<b>Predicted Assessment Result</b>	<b>Actual Assessment Result</b>	<b>Predicted Subject Grade</b>	<b>Actual Subject Grade</b>	<b>Past Average Grade</b>
Surface	- 0.156 (0.0906)	- 0.032 (0.7321)	- 0.099 (0.3108)	- 0.213 (0.0201)	- 0.181 (0.0519)	- 0.057 (0.5411)
Deep	0.534 (0.0001)	0.246 (0.0070)	- 0.066 (0.5012)	0.220 (0.0163)	- 0.110 (0.2571)	0.105 (0.2617)
Achieving	0.543 (0.0001)	0.187 (0.0421)	- 0.020 (0.8409)	0.130 (0.1594)	- 0.050 (0.6104)	0.261 (0.0044)

**Table 9: Correlations of Perceptions of Contextual Variables  
with Overall Satisfaction**

	<b>Present Study Satisfaction with Course</b>	<b>Mathews et al (1990) Satisfaction with Degree</b>
Good teaching	0.56	0.60
Clear goals and standards	0.46	0.47
Appropriate workload	0.34	0.21
Appropriate assessment	0.27	0.40
Emphasis on independence	0.44	0.40



## Appendix A Adapted SPQ Questionnaire

### UNIVERSITY OF WOLLONGONG DEPARTMENT OF ACCOUNTANCY ACCY 312 MANAGEMENT ACCOUNTING III

ID: \_\_\_\_\_ Age (yrs): \_\_\_\_\_ Male/Female (Please circle one) FT/PT (Please circle one)  
Country of birth: \_\_\_\_\_ Father's country of birth: \_\_\_\_\_  
Mother's country of birth: \_\_\_\_\_

**Circle the number that best fits your immediate reaction. Please note: there is no "right" answer.**

	Always True		True ½ Time		Never True
1. I think browsing around is a waste of time, so I only study seriously what's presented in class or mentioned in the course outline.	5	4	3	2	1
2. While I am studying, I often think of real life situations in which the material that I am learning would be useful.	5	4	3	2	1
3. I summarise suggested readings and include these as part of my notes on a topic.	5	4	3	2	1
4. I learn some things by rote, going over and over them until I know them by heart.	5	4	3	2	1
5. In reading new material I often find that I'm continually reminded of material I already know and see the latter in a new light.	5	4	3	2	1
6. I try to work consistently throughout the term and will review when the exams are close.	5	4	3	2	1
7. I enjoy topics with a lot of factual content rather than theoretical kinds of topics.	5	4	3	2	1
8. I find that I have to do enough work on a topic so that I can form my own opinion or view before I am satisfied.	5	4	3	2	1
9. I try to do my tutorial assignments, my essay and my case studies as soon as possible.	5	4	3	2	1
10. I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.	5	4	3	2	1
11. I try to relate what I have learned in other areas to this course.	5	4	3	2	1
12. After a lecture I reread my notes to make sure they are legible and that I understand them.	5	4	3	2	1
13. I learn best from lecturers who work from carefully prepared notes and outline major points using visual aids.	5	4	3	2	1
14. I find most new topics interesting and often spend extra time trying to obtain more information about them.	5	4	3	2	1
15. I test myself on important topics until I understand them completely.	5	4	3	2	1
16. I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances.	5	4	3	2	1
17. I spend a lot of my free time finding out more about interesting topics which have been discussed in class.	5	4	3	2	1
18. I make a point of looking at most of the suggested readings that go with the lectures.	5	4	3	2	1
19. I am very aware that lecturers know a lot more than I do and so I concentrate on what they say is important rather than rely on my own judgement.	5	4	3	2	1
20. I try to relate new material, as I am reading it, to what I already know on that topic.	5	4	3	2	1
21. I keep neat, well-organised notes for this course.	5	4	3	2	1

22. I chose my present degree largely with a view to the job situation when I graduate rather than out of their intrinsic interest to me.	5	4	3	2	1	
23. I find that at times studying gives me a feeling of deep personal satisfaction.	5	4	3	2	1	
24. I want top grades in most or all of my courses so that I will be able to select from among the best positions available when I graduate.	5	4	3	2	1	
25. I am discouraged by a poor mark on a test and worry about how I will do next time.	5	4	3	2	1	
26. While I realise that truth is forever changing as knowledge is increasing, I feel compelled to discover what appears to me to be the truth at this time.	5	4	3	2	1	
27. I have a strong desire to excel in all my studies.	5	4	3	2	1	
28. Whether I like it or not, I can see tertiary education is for me a good way to get a well-paid or secure job.	5	4	3	2	1	
29. I feel that virtually any topic can be highly interesting once I get into it.	5	4	3	2	1	
30. I would see myself basically as an ambitious person and want to get to the top, whatever I do.	5	4	3	2	1	
31. Even when I have studied hard for a test, I worry that I may not be able to do well in it.	5	4	3	2	1	
32. I find that studying academic topics can at times be as exciting as a good novel or movie.	5	4	3	2	1	
33. If it came to the point, I would be prepared to sacrifice immediate popularity with my fellow students for success in my studies and subsequent career.	5	4	3	2	1	
34. Lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.	5	4	3	2	1	
35. I usually become increasingly absorbed in my work the more I do.	5	4	3	2	1	
36. One of the most important considerations in choosing my essay topic was whether or not I would be able to get good marks in it.	5	4	3	2	1	
37. I almost resent having to spend 3 or 4 years studying after leaving school, but feel that the end results will make it worthwhile.	5	4	3	2	1	
38. I believe strongly that my main aim in life is to discover my own philosophy and belief system and to act strictly in accordance with it.	5	4	3	2	1	
39. I see getting high grades as a kind of competitive game, and I play it to win.	5	4	3	2	1	
40. I am a university mainly because I feel that I will be able to obtain a better job if I have a tertiary qualification.	5	4	3	2	1	
41. My studies have changed my views about such things as politics, my religion, and my philosophy of life.	5	4	3	2	1	
42. I believe that society is based on competition and schools and universities should reflect this.	5	4	3	2	1	
43. I am satisfied with this course	(A lot)	5	4	3	2	1 (Not at all)
44. For my first assessment task I expect to receive (%)	0-49	50-64	65-74	75-84	85-100	
45. In this course I expect to receive (%)	0-49	50-64	65-74	75-84	85-100	
46. My overall average in all courses so far has been (%)	0-49	50-64	65-74	75-84	85-100	

## Appendix B Adapted CEQ Questionnaire

### UNIVERSITY OF WOLLONGONG DEPARTMENT OF ACCOUNTANCY ACCY 312 MANAGEMENT ACCOUNTING III

**About you:**

ID: \_\_\_\_\_ Age (yrs): \_\_\_\_\_ Male/Female (Please circle one) FT/PT (Please circle one)  
Country of birth: \_\_\_\_\_ Father's country of birth: \_\_\_\_\_  
Mother's country of birth: \_\_\_\_\_

**Circle the number that most accurately reflects your view.**

	Strongly Agree		Not Sure		Strongly Disagree
1. It's easy to know the standard of work expected of me in this course.	5	4	3	2	1
2. There are few opportunities in this course to choose particular areas I want to study.	5	4	3	2	1
3. The teaching staff in this course motivate me to do my best work.	5	4	3	2	1
4. The workload is too heavy for a 12 credit point course..	5	4	3	2	1
5. Teaching staff frequently give the impression that they haven't anything to learn from students.	5	4	3	2	1
6. I usually have a clear idea of where I'm going and what's expected of me in this course.	5	4	3	2	1
7. Staff put a lot of time into commenting on students' work.	5	4	3	2	1
8. To do well in this course all I really need is a good memory.	5	4	3	2	1
9. This course encourages me to develop my own academic interests as far as possible.	5	4	3	2	1
10. It seem to me that the syllabus tries to cover too many topics.	5	4	3	2	1
11. Students have a great deal of choice over how they will learn in this course.	5	4	3	2	1
12. Staff seem more interested in testing what I have memorised than what I have understood.	5	4	3	2	1
13. It's hard to discover what's expected of me in this course.	5	4	3	2	1
14. I am generally given enough time to understand the things I have to learn.	5	4	3	2	1
15. The staff make a real effort to understand difficulties students may be having with their work.	5	4	3	2	1
16. Students are given a lot of choice in the work they have to do.	5	4	3	2	1
17. Teaching staff give helpful feedback on how we are going.	5	4	3	2	1
18. Our lecturers are good at explaining things to us.	5	4	3	2	1
19. The aims and objectives of this course are not made very clear.	5	4	3	2	1
20. Teaching staff work hard to make this course interesting to students.	5	4	3	2	1
21. Too often staff ask us questions just about facts.	5	4	3	2	1
22. There's a lot of pressure on me as a student in this course.	5	4	3	2	1
23. Feedback on student work is usually provided ONLY in the form of marks.	5	4	3	2	1
24. We often discuss with our lecturers or tutors how we are going to learn in this course.	5	4	3	2	1
25. Staff show no real interest in what students have to say.	5	4	3	2	1
26. It would be possible to get through this course just by working hard around exam times.	5	4	3	2	1
27. The course really tries to get the best out of all its students.	5	4	3	2	1
28. There's very little choice in the this course in the ways you are assessed.	5	4	3	2	1

29. The staff make it clear right from the start what they expect from students. 5 4 3 2 1

30. The sheer volume of work to be got through in this course means I can't comprehend it all thoroughly. 5 4 3 2 1

31. I am satisfied with this course (A lot) 5 4 3 2 1 (Not at all)

32. For my first assessment task I expect to receive (%) 0-49 50-64 65-74 75-84 85-100

33. In this course I expect to receive (%) 0-49 50-64 65-74 75-84 85-100

34. My overall average in all courses so far has been (%) 0-49 50-64 65-74 75-84 85-100